Physical Media Migration

Purpose: To reduce the overall footprint of physical tape by deleting obsolete data or migrating tape data to virtual tape.

Approach: DTS is copying cataloged data from individual physical tape to the virtual tape system using the Tape Copy program. For the uncataloged data on physical tape, DTS needs customers to review what they have so they can determine the data's usefulness. After the customers delete obsolete data, DTS will copy the remaining needed uncataloged datasets, and provide the customer with a reference list of the new volsers containing their tape datasets.

Background: The DTS has two initiatives and one 'best practice' driving this project. The first initiative to be implemented will be a single Virtual Tape System for both campuses. By doing so, the DTS will be able to leverage a single knowledge base versus staff retaining the skills to manage two separate, non-compatible systems, reduce floor space and eliminate maintenance fees by retiring one system. Most importantly, the Virtual Tape System will replicate data between the two campuses for an internal Operational Recovery plan that can significantly reduce the recovery window for our customers should one of the campuses experience an extended loss of service.

The second initiative involves the closing of the Cannery facility and consolidating tape operations to the Gold Camp facility. The Cannery complex is to be vacated no later than March 2011. Another campus will be utilized to leverage operational redundancy in another geographic area. This facility will be remotely managed as much as possible. To achieve this goal, tape operations in the new facility will be near fully automated through the use of Automated Tape Libraries with robotics and the Virtual Tape System. All other physical tape operations will be processed at the Gold Camp facility which has limited computer room space available.

Over time, some of our customers have lost track of the data retained on physical tape. This happens by staff retirement or taking on new jobs, changes in processes or in some cases changes in technology. These old tapes are subject to degradation and more susceptible to errors during processing or customers may discover a complete loss of data. Our 'best practice' approach is to copy the data to new media. Customers are essentially 'refreshing' the data, giving it 'new life' for future reference.

Challenges: Not all data is worthy of copying. Through analysis of tape datasets, we have found over 50,000 uncataloged tapes. Generational processes that were stopped or were updated by other processes left previously created tapes behind. Some tapes have been retained with no data on them from process failures. Some data is being kept forever with permanent retention dates by a staff member who has long retired.

Unfortunately, other staff has a hard time determining the data's usefulness or understands why the data was retained or what processes it may be associated with. Despite this challenge, the DTS needs all customers to dig in and look at the tape data being retained. After all, you as a customer and all of us as taxpayers are paying to retain each and every tape. In tough budgetary times, we want to help you save money so you can use your funds in a more productive manner.

Together, both Gold Camp and the Cannery facility blossomed to over 700,000 physical tapes. The DTS zOS Storage Unit and Operations staff have been able to remove several thousand physical tapes by copying the data into the virtual tape systems. We need your support and active participation for the remaining tapes. We can provide lists of tapes through the Customer Relations staff so every organization can take a look at the data stored on tape and determine if it should be retained. Delete what you can. What you must retain, we would like to work with you to put it on more reliable media. If you have staff available to copy the data to other media, that's great. If not, we're here to help. As an example, if you must retain data that is uncataloged, we can copy that data to new media and provide you with a reference list containing the dataset name, the original tape volser and the new tape volser.

There is also tape media being stored at the offsite storage facility for Operational Recovery or archival purposes. Some of this media has been there for over 20 years. If this data truly needs to be retained, then you need to consider moving it to modern technology. Over time, even in optimal conditions, the magnetic coating on tape can deteriorate. Moving this data every few years is a good practice. As we move forward, we will be seeking your permission to bring these tapes back from offsite storage so they can be copied to newer media and then return it to the offsite storage facility. The exposure of not having the media stored offsite should not exceed 3 days per tape.

For media withdrawn by a customer for DATA EXCHANGE to another facility or business partner, we encourage the use of Secure FTP.

With the new Virtual tape System replicating data to both campuses, and other efforts under way to provide internal Operational Recovery, we're hopeful customers no longer feel the need to store data at the offsite storage facility. This will save even more money and should provide a comfort level knowing that the single tape that was offsite is now two copies for the price of one stored at the alternate campus.

We've made great progress over the past few years and need you to help clear the final hurdles. Your active participation will ensure good data remains viable with faster access. By cleaning house you'll stop paying for tapes that haven't any real value as the data is obsolete or unreadable. The tape data you need to retain will be on newer, more reliable media and DTS will be able to further our

efforts to consolidate processes, regain valuable floor space and keep your tape data viable for years to come.

For further information or assistance in migrating data or deleting tape files, please contact:

StorageAdministration_DG@dts.ca.gov